1776.01

U.S. ENVIRONMENTAL PROTECTION AGENCY

PUBLIC MEETING

REPORT OF PROCEEDINGS had on October 25, 1994 at the Venice Senior Citizens Center, Venice, Illinois.

* * * * * * *

MS. PASTOR: Thanks for coming. This is the public meeting for the NL Industries/Taracorp site here in Granite City. We're also doing work, as you know, in Venice, Madison and surrounding areas. This meeting, as you will notice, is being recorded by a court reporter over there, so if you have any questions or comments when we get to the comment portion of the meeting, if you do have something that you'd like to state, she would need you to speak clearly, and spell your name for her. That will make

it easier on her. I'm Sue Pastor; I'm community relations coordinator for this site. Brad Bradley is the remedial project manager. He is the technical expert on this project. And Pat VanLeeuwen is the toxicologist who also works for U.S. EPA. She has lots of experience dealing with lead studies and lead issues. Brad and Pat will be doing a little bit of talking. And if you notice on the agenda, Brad will talk a little bit about the site, give you an update, if you'd like, on the alley and residential property cleanup and talk about what our proposed plan is, and what that is.

The reason why we are here is that we are in a remedial public comment period for clean uplevel for lead and soil, and Brad will talk a little bit about that. Pat can maybe explain a little bit about how we got that number. Between the two of them, hopefully we can clarify any questions, or any ideas that you have, or any concerns that you may have. And hopefully you'll be able to leave tonight with some more information that you didn't have when you came in.

If you didn't get the fact sheet, I hope you pick that up. I handed it all to you. So if you

didn't get that in the mail by signing our sign-in sheet, you will be on the mailing list. You will get all of our information in the mail from here on out. There is more information to be added in the Granite City Public Library. That's called the information repository. That has lots of the documents that will pertain to the site. So if you'd like to read technical information, that is there, too; along with the Administrative Record, which has even more information pertaining to the site. But hopefully the fact sheet that we provided you with will supply a lot of what we are talking about, and answer any questions you may have.

So I think in the interest of moving things along -- Hopefully, we can just meet your needs, since we're a small group, and we will try to give you a lot of information in a short period of time. But if we miss anything, when we get to the questions, we will gladly answer your questions. If not, when we get to comments, which is a little different, you can make a statement in a statement form, as opposed to a question, and we have the room, you know, for a little while longer yet. So we can take and answer any questions you may have. Brad.

MR. BRADLEY: We're here to discuss the residential soil lead cleanup level at the NL Industries/Taracorp site. If there are any other comments or questions regarding the Taracorp pile, ground water, we will entertain those, too. But what we are receiving comments on right now is the current cleanup level for the residential soils. The NL Industries/Taracorp site is located in Granite City, Madison, Venice, and Eagle Park Acres, and there are even a few spots in Glen Carbon where we've found some of the waste material. The main industrial area is shown on this map. That's where the former secondary smelter operated. That's also where the Taracorp pile, the 85,000 cubic slag heap was located. And the waste material migrated from the site through several pathways. One was the smelter stack. The smelter stack put out lead in the air, which then settled into the area around the site. There is also a slag pile, which may have also contributed to some dust emissions, as recently as of the end of '92, early '93. We've found that also contaminated the ground water. The lead volumes that we've detected in the wells adjacent, the down gradings of the Taracorp pile, is well over the standards, federal standards

for lead. And the third route was in the late '50's and early '60's, the NL Industries advertsied free fill material from the slag pile. And this fill material was almost exclusively hard level battery case material. That's how it came to be located outside or its own influence, the smelter stack. We found levels of lead that were carried maybe a mile, a mile and a half away from the smelter. But battery casings were taken much fartner. In the case of Glen Carbon, that happens to be 15 to 20 miles away. And the most, the hardest hit areas, as far as the battery case material, is in Venice and Eagle Park Acres.

What I have here is a map. The industrial area is in green. The area that we anticipate would be impacted above 500 parts per million around the smelter is marked in black, and red here. There is one little area, a little peninsula that sticks up here. That's also part of the area that was impacted by the smelter stack emission. The area shaded this purple are where the battery case material was used as fill. And that's what, except for the little peninsula, that brings Venice and Eagle Park Acres into the picture. And we've cleaned up a lot of the battery case material from alleys in

Venice, and from the yards, parking lots and driveways into the Eagle Park Acres, and we've -- To-date, we've spent about nine million dollars cleaning up the battery case material. We've also - - We've just began in late '93 and continued in August of this year eliminated a number of residential cleanups around the Venice site that had highest lead concentration from the smelter stack emissions. To-date, we've done somewhere around 2/6 of those. We're in the process of doing 17 more, currently.

MR. PALCHEFF: Can we interrupt you to ask specifics while we're going on?

MS. PASTOR: I was hoping you'd wait.

MR. BRADLEY: If you could wait --

MR. PALCHEFF: Like I was just going to say, these pieces of residential property, what was the lead level in those? If it varied, what was the minimum?

MR. BRADLEY: The minimum was, except for a park up at 822 Niedringhaus, it was all over a thousand parts, wasn't it? We cleaned that up because of the children playing there at school. And I can provide you more details, if you will come up in the question and answer section.

But what we basically did in 1990, EPA issued a Record of Decision for the NL site. And what one of the provisions of that is a cleanup level of 500 parts per million of lead in residential soil. We noted that only applied -- That not only would apply to the areas impacted by the stack, the smelter stack emission, but also the cleanups of the higher battery case material in the areas that were within a yard. In other words, not a parking lot, not a driveway, or something that could be a paved use. What we initially were going to do with the driveway, parking lots, soil, and battery case material was clean them up to visual criteria, and then pave back over them with a barrier. We did change that provision through what is called an Explanation of Significant Differences. That's a document where we document a change, not a major change, but sort of the more minor change or remedy. The reason we did that is our initial sampling had shown that the battery case material may go down as far as seven feet. We did not want to expend the money to clean up all of the alleys that we determined were that deep. We felt we would go with visual criteria, and then pave over it. That way, if there was lead left behind that was over 500

parts per million, we would pave over it. Therefore, providing a barrier, and then also have to maintain that to keep that barrier. What we found when were cleaning up the alleys in Venice is that most of the contamination was only in the top 18 inches, and then within the next six inches for a total of two feet of depth. We could get down below 500 parts per million. So we signed the issue of explanation of significant differences to allow us to cleanup these alleys and parking lots once and for all. We wouldn't have to come back, and continue to maintain the cover over that. So we did do that one change in the remedy.

What we're talking about today is through a court agreement, EPA is allowed to open public comment area for residential cleanup levels, and we've looked at the current information, including a blood study that was conducted by Illinois Department of Public Health, and using this current information, which is run with the Biokinetic model, again, which is a tool we use to calculate a cleanup level for, in this case, lead in residential soil, and we have again recommended that we just stick with the 500 parts per million cleanup level. We are entertaining, depending on comments, though, we will make a decision, as far

as whether we will stick with 500, or change that level at the end of the public comment period.

Currently, we have a request for an extension of the public comment period, and we've been granted that. So it will run into December 14 at this point. Then just to get on with what is some of what is left after December 14, if we, the EPA actually changes the cleanup level of residential soil substantially, we will have to do what is known as a Record of Decision Amendment. And if we don't, we will have to write some type of document that says we are sticking with 500 parts per million. In either case, we will have a responsiveness summary which will address all of the comments we have received during the public comment period.

The other things that are coming up in 1995 are putting out a proposed plan for remediation as to the Taracorp, the ground water, the remaining battery case material areas. And the reason we didn't do that yet is that we've got to a certain point where we felt we were ready to make a decision, which would affect the Taracorp pile and ground water.

We did a pilot study to see whether it was possible to solidify the Taracorp pile. By

solidifying it, we would then render it non-hazardous under the solid waste laws, and could take it to a land fill at a much lower cost. What the pilot study showed is, yes, we could solidify it, but it brought up more questions that we did not have answers for, such as what is the density of the pile. Because of the old study that NL Industries did back in '85 through '88 showed the density of the pile a 2.94. What that means, when you take a pile, you know, hazardous waste pile like this, and then solidify it to take it to a land fill, the land fill will charge you based on tonnage. We know that the pile is roughly 85,000 cubic yards, but the density will tell us how many tons that translates to. And when we did our pilot study, we found that density of 1.55. That's roughly half of the density that we had assumed previously. What that all translates to is when you take it to a land fill and use the lower number of 1.55 it's a seven million dollar cleanup. So we need to actually do a physical determination of the density so that we can get the best cost estimate possible, and make a decision on this. And we also need to determine some other parameters to see whether the Taracorp pile can be processed in a secondary smelter.

So at this point we are going to conduct some pilot studies in the next few months, and then we'll come back and propose remedies for the Taracorp pile, ground water, and remaining battery case material. We already have a remedy on the books for the Taracorp pile and the battery case material. What we're doing is reexamining that, and seeing whether we need to change that. The primary reason for looking at the Taracorp pile again is to decide if the ground water contimination that we set out in the original decision, there was no detected ground water contamination, though. Then when we realized that existed, it may be appropriate to do something different with the pile. That's what we will be doing.

And with respect to the battery case materials, what is different now than back in 1990 is that there is so many of them. When NL Industries did their study, they only found four or five alleys and areas in Eagle Park that needed to be remediated. We took a quick look around before we rendered a decision signed it, and thought it might be more like 18. When we got in there, and out in Venice abd Eagle Park and had all of the neighbors coming up to us, telling us,

'Boy, the way it's in my yard, as well,' we've now found probably over 70 locations. So we are reevaluating that, because it's going to get very expensive to continue to remove the battery case materials and take them off-site. So we're examining whether to continue to do that, or whether to do some type of removal and/or paving combination; just maybe pave over some of the ways that are not as highly contaminated.

That is basically my presentation. Pat will go into the basis for the residential soil cleanup program in further detail now.

MS. VANLEEUWEN: As Brad told you, in order to reevaluate the cleanup level at the NL Taracorp site, we provided additional information in the library, in the repository for you. There is a lot more information on the health effects of lead. We welcome you to go down and look at it. You may find something that is of interest that you didn't see before, and will give you more knowledge about lead poison. There is also a copy of the blood lead study done by the Illinois Department of Public Health in the reposiroty, and EPA's comments on that study, which I am not going to talk about today.

There is a report, it's a very small report, and I understand it's disappeared from the file, but we will replace it again tomorrow. It's a primary reassessment of the data that was collected from the lead study that was prepared by Allen Marcus, and he used a biokinetic model, which I am going to talk about a little bit today so that you understand what we are doing. This isn't just a black box used to determine a cleanup level. That report gives you some of the results of his reanalysis of the data from Granite City, and the surrounding areas.

A little bit of background, as you know, the health risks are evaluated by the measure of the lead level in the blood of children. And we measure the blood level, and it's an indication of recent exposure to lead, and it's widely used in the medical arena to tell us whether there is any adverse health effects. Most of the health effects from lead have been correlated with some level of lead in the blood. So by knowing that level, we can give you some idea of what health effects to expect.

The health effects that we're concerned about that have been shown to be associated with blood lead concentration at or above the potential are at 10

micrograms per decaliter is the level that both EPA and Center for Disease Control have put in as their level of concern. The chances that children will have blood lead levels greater than 10 mirograms per decaliter is of great interest to people like myself and risk assessors. What I try to do is to determine if we have contaminants on the site, whether we're going to have any adverse health effects. And so what I do is I use the blood lead level and the chances that a child will have a level below 10.

Okay. There is a couple different ways that you can determine whether there is a problem. You can take blood measurements in children. If you are trying to assess -- You can only assess the properties where the lead children are living. You can't get an assessment of the properties that don't have children, because obviously there aren't any kids to measure. So our concern at EPA is to look at whether there is a potential for an adverse health effect, if someone should move into that property tomorrow or next week or next year, either buy the property and move in with small children, or rent the property. And one of the ways we do that is we do something called a model. A model that the

Environmental Protection Agency is using is called Integrated Exposure Uptake Biokinetic model for lead in children. It's called IEUB model, and it works on a home computer. And the model is a tool that a risk assessor uses just like any models you would use to build something. And by running a model a number of times I can build a description of what might happen in an individual yard in an individual community. It's used to look at the lead exposure from all sources, air, water, soil, dust, paint, if we choose to include paint, and generate a series of possible blood levels that a hypothetical child could have, if he was exposed to all of these different sources of lead.

So the model is used to make a prediction, and it has four different parts. The first is the exposure.

MR. PALCHEFF: Can I ask you to look at your screen, instead of that? Move over so we can see. You're blocking us.

MS. VANLEEUWEN: Sure.

MR. PALCHEFF: You can use that just as well.

MS. VANLEEUWEN: I'm over here. I just

didn't want to talk to the screen, which is the reason why I wasn't doing that.

The first part of the model looks at all of the different ways that a child can be exposed. It puts in a value for the amount of lead that is in water, the amount of lead that is in air, the amount of lead that is in the soil, amount of lead in the dust.

MS. GRIGGS: How long does it take for a child to be exposed to the air?

MS. VANLEEUWEN: We are assuming that this is at least a three-month exposure. We cannot do any calculation in less than three months. Okay. But the model assumes that the child is exposed for a long period of time. It's very difficult to make any prediction about their short-term exposure, because the lead goes into the body and secretes, and then it comes out. It's repeated exposure that we worry about. Unless the child would eat a great deal of lead, if he would eat paint chips, a lot of paint, then you might worry about that as a one-time exposure, where there would be a great amount. But in normal life, it's just the small amounts of dust that a child would eat every day that you wouldn't even

notice that are very, very dangerous.

So what we do is we look at all of these amounts that you would get in on the dust that would take to a child's hands or toys. And from, you know, the soil, things outside that we brought into the house. We look at the amount of dust that comes in from the outside to the inside. We look at the soil to the inside dust ratio, and we put all of this data into the model for an individual yard.

The uptake part is after you eat some of the dust, or breathe some of the dust, how much is actually absorbed into the blood stream. The biokinetic portion of the model, looks at it after the lead gets into the blood, what happens to it in the body, and we have 250 different equasions which describe how it gets from the body level to the blood into the bone, where it's ultimately stored. How it goes in the other tissues, how it goes in the brain can cause some of the health effects that we are worrying about, how quickly it's excreted through urine, sweat, feces, all of those things are modeled in the model. And then there is a different value for each year of the child's age from the first year through the seventh year of life. So there is six

different values in there. So for the first year we use one value for the amount that the child has. The second year, we use a second, a different value for the child age one to two, for child age two to three. Then the last part of the model we have a lot of the statistical programs in there so that we can do things with the data once we've collected it.

Okay. This is just a visual explanation of pretty much what I have said. It just shows it in pictures. We look at dust, soil, and the paint, and diet, and water as a source of lead. We look at how much lead is in each one of those things, how much lead in the air that gets into the lung, is breathed. These things get in the stomach, and then ultimately all of that lead gets absorbed into the blood. And then from the blood, it goes into the different kinds of bones; one is the deep bone, one is the surface bone, the soft bones gets into the red blood cells gets in the kidneys, gets into other tissues, gets into the liver. Then we also look at what the diet is in the stomach, and into the intestines, how much is excreted, and how much is there. That is pretty much what the model does. It looks at how that lead moves through a child's body from seven years of a child's

life.

The model can be applied in a number of different ways, and each way that you apply the model, you get a slightly different risk estimate. And basically, most of the models for the Superfund site is to consider that we are looking at an individual site. Each individual site is typically a child's back yard, and in his own environment. We're trying to guess what a child does. This is a hypothetical child, and so it gives us an idea of how much lead could get into the child's body, if he did all of these things. And we considered surrounding yards as a basic unit, because that's what most preschool children, where they spend most of their time. We can also put in day care or school, if we know the child is in day care during the day. And, of course, that is per unit support for us. What we're going to get is the basis surface of an individual yard.

Again, here is little diagram that shows the different ways that we can use this. I'll show it a little bit at a time. We can look at one child, how that one child is exposed. When I said it gives us an a idea of what blood lead level could be, it doesn't give us a number, it gives us a whole series of

numbers, because it has a lot of the different variables in there that take into account the fact that children are different, and they don't all gain weight at the same rate. They don't grow at the same rate. They don't absorb lead or excrete lead at the same rate, either. So it gives us a little curve. And what that means is it's most likely that the child does this, but if a child, an individual child could do anything on that curve, the blood lead level could be this low, or it could be that high. Most kids will be somewhere right in here, where the curve is the highest.

Or we can look at -- use the model to look at a number of children that live in the same building, a single house, or an apartment house. Those children might be different ages. And so we would start by looking at the lead going into their body at different ages, because they would be starting out at different ages initially, eating different amounts of food, growing at different rates and everything. So that would change the amount of lead that would go into the body. We can look at different children at different neighborhoods, or a lot of different sites with different exposures, and you can

see that children might be different. The shapes would be different, or we could look at different areas. This is especially in the Granite City area, and we might see that the children who live in Venice might be exposed to battery casing chips, where the kids who lived in Granite City might be eating smelter dust. So we can look at both of them. We can say, 'Well, what does this mean for the whole community?' We can combine them, or we can look at them separately.

This is real confusing, I know, but this is what it would look like if we were to run it in the computer. The computer would give us a series of curves, and those curves would be how much lead we would be likely to -- what the blood lead level would be likely to be, if we were to consider different intakes of lead in soil, and in dust. And in this case, we used it to show that if we had a soil lead level of 500 parts per million, but the lead that got into the house changed, we would get curves that would have different shapes. The reason why I show you that is that, in this case, you could see if the dust level was real low, but the soil level was high, most of the kids would have blood lead levels less than 10, and

would be on this side of 10. And then as the dust level started going up in the house, then it would start to shift. You would see that being more likely for a child to have blood lead level over 10. So, these soil dust correlations are important, too.

MS. ANDRIA: The vertical indicates a -- that's an indication of the number?

MS. VANLEEUWEN: Yeah. Or for a single child, the property.

What we can do is we can take -- we can run the curve like this for each child in the community. Say we had 500 yards and we try to get what this shape of this curve would be for all 500 kids, and then we take and plot it different ways. We would plot it in this kind of a plat, and what this plat should show is the actual percentage of the kids. It says tracks of the kids. The track of all of them, meaning that 50 percent would be, or .5 would be five percent or half the kids. And at the bottom it says the predicted blood lead concentration, and we could take any point on this and say if we were worried about 10 micrograms to decaliter, we could look at how many kids were above that 10, and it would be all of these. Okay? Then we could have the computer count

those. That's actually what we do.

And you will see in our report that there is a report of the number of kids that we could get in each area to have blood lead levels that are greater than 10, and that's how we did it. We make curves like this. We have the computer count how many were above 10, how many were above 15, how many where above 20, how many we expect to be above 25. At 25 you would have the child going into the doctor to have some treatment.

Then the last thing I was going to show you is does the model work, is it real. These triangles, the upward ones are the predicted ones from our model. You can see it's this line, and the ones that are inverted are the ones that we actually observed for the children that we did blood sampling, and tested their blood lead level. You can see those are very, very similar. So the model predicts pretty well the kind of blood leads that we measure, and this was very good agreement at this site.

The reason why we use the model, as I said before, is we don't want to have to wait until the kids are exposed to lead to determine whether there has been a problem. We want to be able to look

at the levels of the lead in the soil, in the dust, in the air, and the water, and determine whether the kids are going to be affected by the lead. If they are going to have a problem, we want to be able to clean that up. If you have any questions about that --

MR. GLASPER: On the model you just showed us, these are projections. I mean, how much actually open forum was there, actually? Let me give you an example. You were talking about the moldel that did these projections. Were there kids actually tested in Eagle Park Acres, as far as blood drawn, and actual levels tested to see how much lead was in their system?

MS. VANLEEUWEN: That's an interesting question, because the Environmental Protection Agency has just gotten the data set from the Illinois Department of Public Health. Okay. And we know that there were children tested everywhere. I believe they were tested in Venice. I believe they were tested in Eagle Park Acres. However, the data they gave us does not give us a location. They gave us a data set that told us how far they lived from the smelter. So I can't tell you how many kids were tested in Eagle Park Acres, and how many kids had a blood lead level

greater than 10 or 15 or 20. I just know that there were kids that were tested out there.

MR. GLASPER: I guess my next question is this. I grew up in and around the Eagle Park area. Not so much in Eagle Park, but I can remember walking on those streets out there, and all those casings were on those streets. Now, those streets were all blacktop. Now, it's almost -- What I am trying to say is this is very similar to asbestos, where the government says that you either remove it, or you can encapsulate it. Now, the streets are blacktopped now, and you keep talking about the kids we're talking about. What about people who were exposed at that time, who actually walked those streets? Is there money being put up for prevention or treatment? I mean, I'm 44. I can remember as a little kid I walked through parking lots or the streets in Eagle Park. I've seen first, second, third generations of a family that are still there. Now, how much of those people did get exposed to, though, who were actually there when there was no blacktop and dust was everwhere, and people went down the streets on summer day, 90 degrees, and what is being done for those people?

MR. PALCHEFF: Did you have your blood

tested?

MR. GLASPER: I individually did, just for medical.

MR. PALCHEFF: What was your level, do you know?

MR. GLASPER: Nothing to alarm me. I did go through my physician, because I did it in a regular checkup. But for those people who don't get a checkup, and to me, right now we're worrying about kids right now as opposed to, you know the question I was asking in the forum last year --

MS. VANLEEUWEN: There is different health effects in adults than there are in children. The reason why we are so worried about the children is it affects their ability to learn. It affects their language skills, and it affects their attention span so that they can't pay attention in school. And so the kids who have really been affected by lead are having a great deal of problems learning, and then they have trouble absorbing information, getting jobs later in life and so this goes through you with your whole life.

In the adult, it affects high blood pressure. In women, they may have children with low

birth weight. The babies that are born are born with less chance when they are first born. We've seen some infertility in men. And so there are health effects in adults, as well. But the first seven years actually in life, it's about one to about three years old when a child is growing very rapidly, able to take up more lead, and absorb it much more than an adult would absorb it.

MR. GLASPER: This is my third question or comment. There are risks a little bit earlier. Would the condition you have now where it is not so much exposed as far as people actually riding, walking on it, this, that, and the other going back to her question, how much of exposure presents a hazard to an individual today? Now, specifically, how much -- How long does a person get ill? Is it 72 hours? Most things have an incubation period. You mentioned four months.

MS. VANLEEUWEN: I said that's the minimum that we could even measure any changes. Less than that's -- It's going in at one rate, and going out at another rate, and you want to measure -- Look at the blood lead. Okay. You wouldn't want to measure the blood lead just after an exposure, because

two or three days later, it could be lower again. Okay. We are looking at long-term, constant exposure as being the thing that is the most worrisome here.

MR. GLASPER: I think that to me, the one reason all of this is important, I'm involved in the Community School Board, and kids come to school, you have to have the immunization records. To me, that should be a critical thing, as far as testing the exact amount, how much lead exposure that child has when they enter school.

MS. VANLEEUWEN: That's right. And most of the kids now do get tested with lead level before they start school. The reason for that is to try to identify the children that might have higher levels of lead. If it's very high, they would do some medical intervention. They would actually try to clean it out of the body, if it was really high. If it's lower than that, and they see a lot of kids in a particular area that have lead levels that are above 10, they would want to go into the neighborhood and say, 'Is there a problem in this area? Like is there lead in the soil? Then we have to try to get that soil cleaned up, because we have a lot of kids here that are being exposed to lead.' So we are using the blood

lead level as an indication, and they are doing that in the schools when the kids start school now. It's new in Illinois.

MR. GLASPER: Not only that, but on top of that, if I'm not mistaken, I think in high school you have another immunization examination. So, it's --

MS. VANLEEUWEN: As you get older, for one thing, you don't absorb lead as much as when you're growing. You have a need for calcium to make your bones, and so you absorb lead in the same way you absorb the calcium. So children absorb a lot more lead, because they need it to make -- They need calcium to make bone. So they absorb lead, too. As an adult, you don't need as much calcium, and you aren't able to absorb the lead as easily as you would as a child. Also, when you become an adult, some of that lead that you have absorbed and gotten into your body when you were younger -- Remember, I showed you there were two kind of bones? One of those bones is a deep bone. Now, even though you have a bone, what is on the surface of the bone keeps getting, goes back into the system. Okay. It gets deabsorbed. It goes back into the tissue, and it goes back into the blood,

and circulates through your body again. That's what is on the surface bone. The stuff that's in your deep bones stays there. Okay. And it has layers that form over it so after a while that lead that you got as a child may be in your deep bones now, and it's no longer able to get out. So it still may be in your body, but the lead that you got as a child may not be causing you too much problems as an adult.

Now, if you are still -- If you were working at a company and you were still getting lead -- Say you were doing soldering, and you were still being exposed to lead, you would still have new lead coming into your body. Okay. And that would be in your blood. That would be in the surface bones, and that could cause a problem.

MR. GLASPER: How much, as far as your home can contribute to this, as far as -- By code, you can't solder pipes with lead anymore, and lead solders, just solder used for plumbing it's lead-free now. But as far as older homes are concerned, is the exposure amount minimal, as far as what homes have? Many, many years ago they used lead in soldering joints.

MS. VANLEEUWEN: I'm sure here -- We all

are from Chicago, and up until a few years ago Chicago had a code where you could only put in lead soldering for pipes. And so we have been exposed to lead for a long time in water. What happens to the lead in the pipes where those joints are soldered, it becomes -- I don't know the word to use, but it becomes coated so that lead is not absorbed as easily. And, as you know, now we have regulations where we have to measure the gases that are in the water. There's gases, and we have to see how acidic it is. What we are really worrying about is that acid in the water of such a level that it's able to dissolve the lead in your pipes back out again. And so now we have to have these in our water, see if it can dissolve that lead out. But if you were to put in new plumbing, okay, some new faucets, you could be getting a greater amount of lead in brand new plumbing than you would in old plumbing that was coated and stayed coated. If you have pipes that bang and knock a lot, it could be that you are not getting coating. You could have some lead in your water. You have to drink a lot of water. So for kids, the water is not usually the major concern. It's usually the amount of lead that they get in the dust that's on their hands. Kids put their

fingers in their mouth, they put toes in their mouth. They drop their piece of candy, and pick it up and put it back in their mouth before you see them. That is how they get their lead.

We did a sampling where in one of the studies they dropped a peanut butter sandwich in the dirt, and picked it up again, and you wouldn't believe how much dirt was on that. Kids like to pop that right back in their mouth before you can grab it. That's what we worry about.

MR. GLASPER: Those amounts are just really minimal aMounts, as far as --

MS. VANLEEUWEN: It is a source. It contributes to it. It's all of it together that really causes the effect, but we have done things about controlling the lead in the air, and we've done things to control the lead in the water. Okay. And the soil and dust remain a problem, and even cleaning in our houses. As much as you clean it, if you have got lead in the soil, kids track that dirt into the house on their shoes, you know, and the dogs bring it in. It's going to come in on their toys, and you end up with that lead in the house again. So you can't get rid of it, unless you get it out of the soil.

MR. PALCHEFF: I want to follow up on his question about exposure as a child and exposure as an adult. No one knows that or remembers that he played with this stuff when he was a child. It was out there. You're talking about it's in the deep bone. Can that person be tested? Is it a painful test? Is it too expensive? Is it accurate?

MS. VANLEEUWEN: There is a test that they use. It's very -- There is even one they use to test the lead in the paint on the walls. It's not real accurate. They are still working on it. You have to -- It's hard to do that test. You have to remain perfectly still. There are other minerals in the bone that can interfere with that test. There are a lot of people who are looking at that issue, and trying to decide whether it can be useful. The reason why we don't do it very often, either that, or looking at the amount of blood in teeth have lead also, all of the people have looked at lead in the teeth and hair is because we have a pretty good idea of how the blood lead levels correlate with the health effects, but we don't know how the level in the bone, the levels in the teeth, or the levels in the hair could reflect on people. They are trying to look at how the bone

measurements correlates with the blood measurements, how the bone measurements correlates with the teeth measurements, and how those correlate with the blood measurements. Even though we have values, we wouldn't know what to do with it. Okay. We wouldn't know what it represents.

MR. PALCHEFF: What is the test called? Where would we get it?

MS. VANLEEUWEN: It's an eccho --

MR. PALCHEFF: Who administers it?

MS. VANLEEUWEN: It's very similar to what is done to look at the surface lead.

MS. VANLEEUWEN: There are a couple centers that have been doing research on bone lead, and I think I have put some of those papers in the Administrative Record. So if you want to look at some of those studies, and get an idea of who some of the people who are doing those studies, that would be a good place to go. Go ahead and go to the library and look at those papers.

MR. PALCHEFF: But for the most part, the people who have been exposed to the heavy doses of that as children, there are --

MS. VANLEEUWEN: Sometimes, like during

pregnancy, now the lead can be mobilized again, because the calicium, a woman's calcium in her bone is used to build this skeleton for the new baby. In the process, mobilization can mobilize the lead as well. So there are instances, and during aging where you start to lose bone mass, you can start to have some of the lead come back into the blood stream, but that's not such a large source.

MR. PALCHEF: It's more of a nuisance?

MR. GLASPER: Another question along the line of what they are saying. You are saying that you have the bone absorbing so much lead and that, how do you determine what percentage of the lead in the system comes from air, comes from water, comes from soil, et cetera?

MS. VANLEEUWEN: With the model.

MR. GLASPER: Through your model?

MS. VANLEEUWEN: What we do is we use the measures that we have. This will measure the air level, the water level, soil, and the dust, and then we use each value. That is -- That's why there is -- This Administrative Record has about a thousand, or many papers, because the reason why some of those papers are in there is that values that we have used

in the model come from those papers. That's values that people have determined by scientific studies and so we use the data for the equasions, the tracking the, the coefecients, all those numbers for it come from the minutiae of the study in children, and sometimes in baboons.

MR. GLASPER: I think what I'm driving at is in each area that is going to be different? For example, you are working with 500 parts per million soil, but the people that got the lead in this area may not have got it from soil. They might have got it from air, might have got it from lead paint. And so you are basing your cleanup on the soil, and that may not be the culprit?

MS. VANLEEUWEN: In our model we have not included lead paint. We have only looked at the environmental sources of lead. The reason for that is we need to determine whether there is any risk to the children from the environmental sources, because we have the ability. And from experience, we know that from environmental sources -- We realize that the children may also be getting lead from paint, as well. Okay. But we have not included paint as a source. So any lead that the children are getting from paint is

in addition to what they are getting. So when you see a report that says 16 percent of the kids overall have blood lead levels greater than 10, that's just from the environmental sources.

MR. PALCHEFF: It's known medically and any other way, engineering firms, that you look at longevity as to determine the effects on persons. For example, you are saying that the lead in the babies or kids can cause retardation and so on. I myself live within two blocks of the lead smelter plant in Madison, and I played in the soil. I still eat vegetables from the soil. I am a graduate, an engineer with several Master's degrees, et cetera. So your effect, in other words, from the lead, I should have been really affected. In our area where I lived is the same situation. Nobody is known to have had any physical defects from the lead that has been raised in that area. And I have had my blood level tested recently. It's less than three and a half.

MS. VANLEEUWEN: It's three and an half plus or minus five, because it's not --

MR. PALCHEFF: But that's neither here nor there.

MS. VANLEEUWEN: Scott Clark, who you may

know, and Dr. Brownshein from the University of Cincinatti, has been down here a number of times. Scott Clark is another person who works with him on his studies. Scott Clark and I have kind of a standing joke between us. We had such a hard time getting through school, just think how easy it we had been -- had not grown up in an area like that. None of us know how we've been affected. We can't go back and tell how we've been affected. We can see -- Looking at children, we can see --

MR. PALCHEFF: That's what I am saying. In order to know what the effects are, we should be your model to determine how much did it affect us. We already went through that phase. We went through it when it was real critical, and we weren't affected. Now, you are saying that the kids are going to be affected. There is no more smelter, but the left over smelter is affecting them more than it affected us that breathed the air and the soil.

MS. VANLEEUWEN: I don't know it it is. I know I had the kind of mother that probably a piece of dirt never got in my mouth. She washed my hands constantly. So maybe that helped a little, but that's what we all had. Well, I had a good diet. That's

what we tell parents now to be very careful in washing their kids' hands, as much as you can, providing them with a good diet, because that's preventive.

MR. PALCHEFF: Our parents did that. Don't forget, we were raised during the depression, which is the worse situation as far as cleanliness. That's before your time. People don't know that depression people, in fact, that you ate what you could get. That's all you could have. Didn't have money or anything. You had to wash, try to be clean. One thing our people did. Not everybody did that. Everybody didn't have money for soap, according to the time and means.

MS. VANLEEUWEN: Not everyone you went to school with became an engineer, or had the ability to do the math. Okay. And so, as we said, even like 10 is not a magic number. If your blood lead level is 10, that doesn't mean that you're safe. There is going to be kids who have blood lead level of eight who are going to be affected. Some kids who have a level of 12 who are not going to be affected. Okay. Because not everyone behaves the same. As I said, we don't grow at the same rate. They don't gain weight at the same rate. Not everybody is affected

identically as a distribution of the facts, and you know, maybe not everyone is as lucky as we need to be.

MR. PALCHEFF: I'm suggesting that you have -- What you might have to do what, you might, maybe you should do is look at the people that live in areas where there was worse, as far as lead.

MS. VANLEEUWEN: We can't do. The studies -- We don't know what you were exposed to.

MR. PALCHEFF: I am saying you're determining what I'm exposed to now in the same area. If I were a kid, obviously, I was exposed to something worse at the time that the smelter was in operation

MS. VANLEEUWEN: I don't know that.

MR. PALCHEFF: It had to be, if you are saying it's from the smelter.

MS. VANLEEUWEN: I don't know, you know, what other things may have affected you.

MR. PALCHEFF: We had dirt roads and everything. We played tackle football in it. I'm talking about eating mud. We used to bake potatoes with it around them. That's the way we did it.

MS. VANLEEUWEN: It's those years between. The really critical time is between the time a child is one to three and how much supervision, and

how much supervision when your were playing and maybe ate mud pies, you were eight years and not three years old, or two years old. I don't know. Maybe you don't know, either.

MR. PALCHEFF: The other thing, in Madison for example, the Illinois EPA did a study to determine what they thought the lead levels were in different areas. The highest lead level which they gave you where it was is on Market Street and 2nd Street not on 13th, 14th, 12th Street in Madison, or in front of 15th and 16th, and why? Because of lead paint. The reason I'm bringing that up, you are saying you are worried about kids absorbing lead in Eagle Park may not have been affected as much by batteries as by lead paint.

MS. VANLEEUWEN: We do see high levels out in rings. We don't know whether that's very high level or battery casing chips. Some of those battery casing chips gave levels in yards that were real high, much higher than the smelter. When you are looking at it, you see a curve that goes like that, and it goes up again. Now, I don't know what these exposures are out there. When we model, we don't include lead paint. We just include the data for the soil and

dust. We still get the blip. That worries me. I don't know that it's not paint.

MR. PALCHEFF: I am going a step further. Market and 2nd Street is an example. Nation-wide, if you really check all over the country, you don't have to be there lead or anybody else high level of this from lead paint, and then if you're going to do that, are you going to have funds to cleanup everything? No. You can't afford it.

MS. VANLEEUWEN: The projects that we did using the model does not include paint. It is only projects modeled on environmental lead. We can show that very high levels, like 29 percent of the kids, those kids don't live there now, but they might live there next week or next year, but we would expect to have 29 percent of those properties which show kids with high lead levels, if kids lived in all of those properties. That is very worrisome. That means that something has to be done to clean up those yards.

MR. PALCHEFF: Have you recently found that people were mentally retarded from these cities or areas?

MS. VANLEEUWEN: Not mentally retarded. We found that kids have attention span deficits. They

have problems with language. They have all kinds of learning problems. Okay. And there are quite a number of documented data in the areas people come up to me at different times and said, 'I have medical reports. My doctor suggested it's due to the lead.' I don't know. I'm not a physician. I don't know.

MR. PALCHEFF: The reason I say that is if there are other -- Like when we were kids, our parents, our mother stayed home, and the father went out and did the -- earned a living. Nowadays both are out. So the kids are left alone. And you are saying by learning it may be psychological effects of not having proper parental guidance, and instead of the effects of lead. I am saying that there is more than one cause for these deficits.

MS. VANLEEUWEN: Absolutely.

MR. PALCHEFF: We're not -- In other words, what I'm seeing here is I am not seeing enough wide evaluation as to what, you know, really caused it. Okay. The person is affected, but now let's go down and see why he really was affected, or see whatever it may be.

MS. VANLEEUWEN: Let me summarize it then in two points, and the first point is the reason why

we have this record in the library is we have a great multitude of literature that suggests at certain blood lead levels in children that there are going to be certain adverse health effects. And those health effects have been documented, and are pretty widely accepted by all physicians all over the United States. They are accepted by EPA, and they are accepted by the Center of Disease Control, okay, as real, and things to worry about.

The second thing we did was we took the actual environmental data that we have from the record, and we modeled it, and we tried to predict what the children's lead levels would be, and we predicted that the children would have blood lead levels in the range of the nature that suggests causes these health effects. Now, maybe the children aren't going to play in their backyards. Maybe they aren't going to get this exposure. There is a potential for this exposure. Not only the potential for the children who are there now, but children for all generation of kids, whoever lives there, to have this exposure, unless it's eliminated. I don't know whether that is something that any of us will consider allowing. All kids should have a chance.

MS. PASTOR: Speaking of chances, let's give someone else a chance to speak. Maybe people are getting left out of the conversation. Let's make sure we are including everyone. Are you with us?

MR. GLASPER: Do you know the number of yards you have left to do in Venice?

MR. BRADLEY: Yeah. We had a total number of 72, and we've done about 25. So that leaves 47. But of those 47, some of them tested out below 500 parts per million. So I would say we've got somewhere around 30 left. What we remains is not as bad as what we've cleaned up. So many of the ones we cleaned up over the last couple years were 100,000 parts per million, 70,000, 20,000. What we have left, with a few exceptions, is below 2,000. It is still above 500, and we need to address it. We got rid of the really highly contaminated ones.

MR. GLASPER: Do you have the name of the streets or the addresses, and how many parts?

MR. BRADLEY: If you want to come up afterward, I have some information. If you have a particular one in mind, I can give you the ruling for that. What we did, we numbered them. You know, the alderman and I went around and we numbered them as we

came to different alleys: We numbered 1 to 72. So I don't know exactly what streets correspond to it, but I can look on the map and give you that, based on a number.

MR. GLASPER: I know where my --

MR. BRADLEY: The battery chips?

MR. GLASPER: It's been there 10 years. I didn't now what it was until now.

MR. BRADLEY: Which streets?

MR. GLASPER: Broadway.

MR. BRADLEY: Broadway, and what other streets?

MR. GLASPER: Broadway is the main street. Where Brown intersects Broadway it is easy to see the two streets on each side, because our alleys run perpindicular to Broadway, perpindicular like two streets like Brown.

MR. BRADLEY: A street over, Brown and Green Street?

MR. GLASPER: What is it?

MR. BRADLEY: That's right here.

MR. GLASPER: The other one is Klein. Broadway is --

MS. PASTOR: We can look on the map.

Maybe he can pinpoint it for you. Is that it for you right now?

MR. GLASPER: I have two more questions. My question goes back to the same question this young lady stated over here, going back to Eagle Park. They just recently got their streets paved. It had been a long time ago, and just like this gentlemen said. I am sure Eagle Park has to have had more exposure related directly to lead than people in Granite City, because I can't remember driving too many streets in my time without Eagle Park -- Eagle Park didn't have nothing but those chips. That's all they had. it hasn't been too long that it's been completely blacktopped, and it hasn't been that long. And, you know, what I am trying to say, you know, let me -- I want to use another situation. We talked about this asbestos, and there has been a big class action suit against asbestos. People have gotten thousands of dollars. 'Did you hear about the money I got? I went to the doctor. I worked here. He said that I was exposed to asbestos. I get a lawyer, and I get in in on the class action, and I get X number of thousands of dollars.' This happened. It's happening. I am sure all of you have read about it. All of the people

who are exposed to asbestos in a plant. The thing was, you had to work -- They had a point. You had to be there so many years you worked there. And everybody jumped on the band wagon, even guys who heard about it, about some guys got some money even got diagnosed, and he said you were exposed. Guys lawyer gets 18, 20 grand. This gentlemen said what does he get. He lived next door to the smelter for how many years? All his life. Now, he goes and he finds that bone you were talking about is deteriorating or something, just talking about it. You do not know, though, who were directly affected by it. Now, the guy that worked in it, and was exposed to the asbestos, they said, I think there is a possibility he mAy have some problems as far having kids. Is that true now? I don't know.

MS. VANLEEUWEN: Asbestosis. It causes a very particular kind of lung cancer, which is --

MR. GLASPER: This is the point here.

MR. SIEGEL: Are you discussing a class action suit because of the lead?

MR. GLASPER: Well, now we we're taking about --

MS. VANLEEUWEN: What is the question?

MR. GLASPER: I'm talking about the similar question like this gentlemen said. We still have not made a standard test for those individuals who, at this point in their life, were -- how their bone structure for the guy who was directly exposed to it, not the children that are five or six years old right now, but these guys in a class action suit, the money, or guys who were supposedly exposed to this stuff the number of years that were supposed to be as far as what had to be a starting point. You have to be exposed to it so many years. That's only to go take an examination.

MS. VANLEEUWEN: I guess that's not something that we would be likely to know about. Our agency is the Environmental Protection Agency, and the reason why we are here is to try to remove the lead that is in the soil now, and to protect kids, protect future generations. But this is not the agency that would be doing any class action suits, or anything of that sort. It's not something that we do. It's not one of our --

MR. PALCHEFF: I think what he is asking is what I asked you before about subsequent -- You are looking at the short-range here. I was talking about,

and he is talking about the long-range. Okay. These kids now is what you're looking at in the soil exposure from one to seven years. Okay. What's going to happen to them 70 years from now? We already have a model for you. Myself, and many of the other residents that still live in the area. But there is no assessment as to the effects that it's had on us, and likely to see any effects, as he is saying exposure, the exposure to it in Eagle Park. He is saying, 'Well, how come you are not looking at me, too? What the heck. My bones suddenly may start walking down the street, the bones collapse on me, because they are deteriorated.'

MS. VANLEEUWEN: We haven't seen bone deterioration from lead. We do see --

MR. PALCHEFF: I'm talking about --

MS. VANLEEUWEN: I think that we're looking at is two things here. What you're talking about, you're saying I can be a model, because I grew up here, and if anybody was affected, it was me. Well, what we don't know is what the exposure was to you. We don't have any data in that area. You are saying, 'I'm fine,' and we don't know about your neighbors, or the others, and the one's that aren't

living anymore. We don't know anything about what is in any bone, et cetera. Well, the Environmental Protection Agency is here to address what we have determined to be an exposure problem, potential problem for exposure to children in future generations. What we hope we are doing is addressing it, containing it, present here now, you know, with respect to people who may have been exposed over a period of time. That's an action you may have against the business that did that to you.

MR. PALCHEFF: The thing is, I am going a step further. You're aware of what the effect is on the kids. I am saying that is okay. I have already gone through this. Why not see if there is any effect on me, and that will determine whether there is going to be any effect on these kids, and maybe some of the things that you're doing is a waste of money.

MS. VANLEEUWEN: We can't just do it with you. We'd have to do numbers. We would have to do you, all the kids who you knew in grammar school.

MR. PALCHEFF: Do my age group.

MS. VANLEEUWEN: We don't know what they were all --

MR. PALCHEFF: Model me for the exposure.

MS. VANLEEUWEN: As I said, I don't know what you were exposed to. I don't know whether you ate your mud pies when you were two years old, or you were eight years old.

MR. PALCHEFF: Kids are eating mud pies now.

MR. SIEGEL: Would it be fair to say that the studies that you're doing on children have a permanent effect on them? If you said IQ's are lower, and are likely to be lower throughout their lives so that information you're getting on the effectss on children is also going to be relevant to adults?

MS. VANLEEUWEN: I think that it's more than just measuring IQ's, Steve. I think that everything I have seen lately indicates that IQ's of age -- If we were to measure you now, maybe you have a higher IQ than you would have had when you were younger, when you were 18. But there are studies that suggest that these three IQ points or five IQ points that you might lose, that may or may be not measured. If there are, that we can't really look at IQ as a real hard index in the number or IQ points that you would lose for certain blood lead levels. Okay. So that is a hard one. We don't have enough data to say

that with any accuracy. What we do know is that the kids who do have higher lead levels have trouble learning. They do have lower birth weight. They have lower bone structure. There are a number of things that we do know, and that we want remedied.

MS. ANDRIA: Just a second. My father grew up in a similar time to Mr. Palcheff. They have a similar background. They are both Macedonian. I am sure they had similar food habits, because it's a very Macedonian food, and Croatian is very similar. There is a lot of calcium in that diet, yogurt, spinach, all kinds of things that would counter that. A lot of children I have dealt with with the lead levels now at higher lead levels don't drink milk. They don't -- They're eating fast foods that have little spinach or anything that is going to force that calcium out. I don't think he is a person you should be looking at as some kind of model that we can see what this does.

MS. VANLEEUWEN: The people on the curve. We would have a curve.

MR. PALCHEFF: She's wrong in many aspects, because she doesn't understand we had our own cows. They grew -- They actually had pastured land that they had that was right next to National Lead,

and the milk that we got from the cows came from the grass that was next to National Lead. So if you're talking about calcium, all of our calcium in ours would have ingested lead. I am just saying --

MS. VANLEEUWEN: I don't know too much about lead in cows.

MR. BRADLEY: Since we are going around --

MR. PALCHEFF: I'm brining this up to you. These are things you need to address, in addition to your normal models. I am saying that I don't think you're going into the real problems with enough depth, because the same thing goes with these people that you're finding deficiencies whether they came from lead, like the lead plant, lead paint, or what it is. I am saying that there are many areas in the country that may have lead from other sources that may be more detrimental than what lead we had here.

MS. PASTOR: Maybe since we are not asking questions anymore, just sort of bantering back and forth, maybe we can make this the start of the comment part. You remember we have it on the agenda. We're really here also in the middle of the comment time to give us your statements, and that's sort of

what we're getting into now, opinions and statements. How many --

MR. PALCHEFF: I had some. I'll be back tomorrow so I don't miss out on any.

MS. VANLEEUWEN: We'll just answer some of them. The EPA does not do studies or use models to produce blood lead levels in the children, but we use the literature, we use the studies that have been done by all of the these physicians, and people all over the world, okay, who have studied the effects of lead on children. I am not doing studies.

MR. BRADLEY: Just for the paint versus soil concept, the EPA is not saying paint is not a problem in Granite City. We feel that, based on studies that have been done down here, and our own observation of, you know, the age of houses, and you know, when they were last painted, soil and paint are both a problem. Where you run into trouble is the law that we work under doesn't allow us to abate paint. We admit it's a problem, but what is your -- The source of that superfund is basically a law that deals with companies or businesses that have put out emissions, or somehow, you know, created an impact on people's lives, or to their health by allowing the

spread of pollution. And when you get to the paint, the law doesn't allow us to clean it up. Who would we charge if we were to clean it up? The individual homeowner? That's not what the law is envisioning. And with respect to whether the paint is the biggest problem, I don't know. It probably depends on the home, but we can see a clear -- It is absolutely clear that as you get closer to that smelter, you get more problems with high blood lead levels. You get much higher soil lead levels. I don't think that every house that's further away was never painted with lead base paint. There is probably a similar pattern of paint composition on houses. It's obvious to us the smelter is the source of a lot of the lead in the soil. It all points right back to that same smelter. It keeps getting higher as you get closer to it. It's clear to us we have an industry that created a high lead contamination problem that needs to be addressed, and paint is a difficult issue. We agree it is a problem. We don't really have the means to address that right now. We will be glad to work with anyone else to try to work out --

MR. PALCHEFF: What were the units of density on the 2.94 or what points per cubic yard?

MR. BRADLEY: I think that's right. Tons per cubic, yeah.

MS. PASTOR: Okay. Before we do comments, does anyone have more questions?

MR. PALCHEFF: That's an old study?

MR. BRADLEY: Right.

MS. PASTOR: If someone has something they want to say in the form of a statement, you can take that now. If you have more questions, we can do a little bit of that later.

MR. GLASPER: I have a statement.

MS. PASTOR: Again, this is like a statement and not a question. So for the court reporter, at this time, could you state your name and spell it for her, if she needs it.

MR. GLASPER: Well, maybe it's not. It's a statement in regard to the follow-up as far as how the alleys are being put back in condition after the cleanup. That's what the comment is on.

Mr. BRADLEY: Which alley?

MR. GLASPER: 517 Fieldmore. And the day that they came back and chipped my alley, it was a poor job. I asked the gentleman that was on the machinery, 'Sir, are you finished?' He says yes.

Well, as far as I'm concerned, there is not enough rocks down. You can see the oil, and I can't even walk in the alley right now. I have to track this in my home. It was a poor job, and as to this date it still hasn't been fixed. There are still 72 alleys, and I told the alderman about it. It was just a poor job, and I don't think we should have to live with this. You can't walk on the alley while it's still being tar without sinking in it. I think the alleys should be put back in the condition that they were found.

MS. PASTOR: Thank you for that comment. Someone else have a comment?

MS. GRIGGS: I noticed that some of the alleys have rocks, and I notice that some of the alleys are concrete. Why was that?

MS. PASTOR: This is not questions. This is just comments. Well, if you have a statement, or anyting about -- That's a question.

MR. PALCHEFF: Yes, I have a statement.

MS. PASTOR: You're name?

MR. PALCHEFF: My name is George Palcheff. I live at 12th and Grand in Madison, Illinois. My comment is that I think you need to

assess before you remove the soil, whether there are alternate means of reducing the lead level, for example by tilling the soil. I have examined where I grow my vegetables, the lead level was 300 per 350, and an adjacent part they found one spot only. They checked one spot, 550. And as an engineer, first of all, one spot in a big yard is insufficient to determine what the average or the yard may be, and so I think that before you determine whether you are going to remove soil or not recommend removing it, I think you have to determine what the real soil level is. And you should consider, as I said an alternative instead of removing the soil, the possibility of tilling, because I can show you by tilling where I grow the stuff and it does affect it. If I did have higher lead level in that area, I must have reduced it substantially.

MS. PASTOR: Thank you for that comment. Any other comments? Anyone else? Thank you for those comments. We'll close the comment portion of the meeting. Those comments will be responded to in a little while in what we call a Responsiveness Summary. And the copies will be part of the official record, as well, after the time period when it's over, December

14. We will look at all of it. You have a little time for getting that in the mail. So if you looked at the fact sheet, there is a little insert so that if another thought strikes you in the next month or so, and you want to jot it down and send it, you may.

We have another meeting tomorrow night. You can hand it to us, or make another statement, if you think of something. Otherwise, for now, we will just close this portion of the comment portion of the meeting. And we can take a couple more questions. We have to get someone over here to lock up this room. So we can do a couple more, and then we will probably have to close it.

MS. ANDRIA: If the EPA, like he just suggested, rototilling, and they did rototilling study, if they hand in results of this study, how do the citizens have an opportunity to look at their comments, and the comments, if they are to be considered? Would you -- At this stage, is it appropriate for you to consider such a thing as rototilling, or some other remediation?

MS. PASTOR: I don't believe the law provides for that. We can have our attorney help us out here.

MR. SIEGEL: Actually, earlier in the process, several years ago, some parties brought up the issue of tilling, and we did provide a response to them, which we would be happy to give you a copy of.

MR. PALCHEFF: I'd like to a get copy of that response, too.

MR. SIEGEL: Sure.

MR. PALCHEFF: Like I said, I can show you two pieces of land right next to each other where I am still growing vegetables. It's tilled every year. It's lower than the part where you are saying I have got 550 or so. That's another thing I feel that that's close to questionable, whether you should do it.

MS. ANDRIA: You keep on asking a different question.

MR. BRADLEY: You also brought up that they did a tilling study. First of all, they have not given us a copy of that study. I don't know if they will during this time period. In a sense, it's not relevant, because we're dealing with the cleanup level, not the method of cleanup. As Steve Siegel stated, we've already commented on the merits or lack thereof of tilling, and we'd be glad to share that

with you. To-date, they still haven't given us the study. It's something to look at. It's not really what we are here to talk about or consider, because we're checking at the cleanup level, not how do you clean it. We've already more or less been through that. That's not what we're commenting on here either.

MS. ANDRIA: My question still stands as to whether something can be submitted by whatever parties or citizens, is there some sort of structure, place, or procedure in place that people can see what the comments are so that they can comment then on the comments?

MR. SIEGEL: There is no provision for continuous comment on comment, because that continues on and on. Basically, the law provides for people to submit their comments during a prescribed period, and for the agency to respond to those comments, and then make a decision.

MS. ANDRIA: Are those comments available to be seen in this interim period?

MR. SIEGEL: If people care to, prior to to the conclusion of the period, we'd be happy to add those to the library's collection so that you can look

at them.

MR. PALCHEFF: Wouldn't it be a worthwhile consideration to take some of -- more of your time and get all of these comments and evaluate, and at the end of your evaluation, then have a town hall meeting, present what people have suggested this, and this is why we are not doing that, or this is why we are going to do this, based upon this. What we've done before, we are looking at this alternate approach, and this is the logic why we're doing this, period. What you were asking for other people or comments to --

MR. SIEGEL: In a sense, we've already done that. As you know, this is not the first comment period we've had on this issue. So we've actually had a comment period and comments submitted. People are now commenting on previous comments submitted in that --

MR. PALCHEFF: Like she's saying, comments and anything, and not let them know what the effect is. It's like gone until another on. It's shot. You haven't considered it.

MR. SIEGEL: What we do, so that you know, if a comment has been considered is we need to

respond to each comment that we receive. That was the purpose of the official comment section of this meeting. That's the purpose of giving people an opportunity to submit their comments, as well. We do need to respond to those. We intend to. When you see the Responsiveness Summary, you will see comment, response, comment, response.

MS. VANLEEUWEN: That's summarized in the library.

MR. PALCHEFF: Will you send us a copy so we know what you're doing?

MR. SIEGEL: It will be available in the library for anybody to view. You can certainly request a copy of it, as well.

MR. PALCHEFF: That's the other thing. I have been to the library to try to look at the volumes, and you have got addendum, addendum. It's very difficult to determine which volume should I be looking at to find information that I am interested in. For example, you had some -- We talked once before. You had a particular volume where you listed all of the streets and addresses and what the lead levels were. What volume or addendum is that now in?

MR. SIEGEL: May I suggest what you

should do is at the conclusion of this comment period, what you are asking for is a document called Responsiveness Summary. Why don't you give us a call, and ask us for a copy of the Responsiveness Summary? We'd be happy to send it to you.

MS. PASTOR: Not every one wants one cluttering their mailbox. If you want one, it is not a problem.

MR. PALCHEFF: I wasn't talking only about that, but, I mean, four different areas that you --

MS. VANLEEUWEN: There is an index. There should be an index, and it says that Number 63 is such and such a paper.

MR. PALCHEFF: What I propose is index the first set of the first volumes or so, and then you have an index that jumps so they are not in that first index. I even have talked to the librarian.

MR. BRADLEY: There is now a second index in there.

MS. PASTOR: If you really get there and are really stumped, and you know the kind of information you're looking for, try as you might, you just can't find it, call up Brad, and just ask him.

You can call on the 800 number and ask. If you just can't find this piece of information, he probably could figure it out for you, direct you to the exact volume.

MR. PALCHEFF: Ask for two volumes? I just asked Brad to tell me what the best volume was that shows all of the properties in Madison and Granite City.

MR. BRADLEY: It's called volume or addendum. It's Appendix G.

MR. PALCHEFF: Appendix G?

MR. BRADLEY: To a large report.

MR. PALCHEFF: Appendix G? There is about six different sections of it; right?

MR. BRADLEY: Yeah

MR. PALCHEFF: Which section?

MR. BRADLEY: G. It's you goes A, B, C, D, E, F, G. If I remember, there really isn't --I mean, there are only two parts to that. One of them is a statistical analysis. Then the back end is alphabetically by street in order of number, and what the results were. Just flip to the back of that. What that is, it's not a document by itself. It's an appendix to a document, Predesigned Field

Investigation.

MR. PALCHEFF: Predesigned --

MR. BRADLEY: Field Investigation. That's the sixth or seventh appendix to that.

MR. PALCHEFF: What was that date, do you know?

MR. BRADLEY: I don't know if I have that here. It was -- Let me see. It was in '92, I believe.

MS. PASTOR: Is that the cover there?

MR. BRADLEY: No. That's only part of it.

MR. PALCHEFF: There are volumes missing, too. What about your volume that you were talking about, the model?

MS. VANLEEUWEN: We have submitted supplements to the Administrative Record, which includes something like 102 new entries in those. There is an index. There is an index, and the best thing to do is just read through that index, and see if there is anything that you are interested in.

MR. BRADLEY: I'm still looking.

MS. VANLEEUWEN: It was on the very last --

MR. BRADLEY: I think it was Number 112. It's the last entry.

MS. VANLEEUWEN: I am not sure it's the last.

MS. ANDRIA: Can we put that on reserve?

MR. BRADLEY: Someone other than -- It's really not supposed to be taken out, but sometimes we can't -- It's currently just lined up on a shelf, and anybody can go in there. If someone wants to remove something, you can take that sheet out. It is only four pages.

MS. PASTOR: See, they are not supposed to.

MR. BRADLEY: It's fairly small, too. It's a small report. We've had things with -- problems with things being removed. It's common in a lot of the places we work.

MR. PALCHEFF: The way they are filed, and the way they are boxed, box them, and they stand on top of the radiator. There are no bookshelves in there. The library records, as there was before, I am telling you they are putting some of them together myself. I have tried to look through them. That's why I was asking you for specifics, you know. I even

talked to the librarian who was in charge, and they say, 'We don't know. We don't know.'

MS. PASTOR: That's the best they could do. They don't have a lot of shelf space. We can't ask them to take books off of the shelves to put our material up there. All we can ask is that they house our material, make it available to people, if they come in and ask for it. They aren't obligated to know piece-by-piece what is in there, you know. Hopefully, with what Brad has told you, that can kind of help you out, kind of probably a tip to help you out if you --

MR. PALCHEFF: Get boxes and put them in them in.

MR. BRADLEY: We'll take a look at it tomorrow, too. If something is missing in there, or you cannot find it, certainly let us know. If it has been removed, we will replace it.

MR. PALCHEFF: You suggest G? I suggest you get some paper boxes, seriously, and just put them on there, put in them to act as a bookcase, and have them in sequential order, as they should be. There's a better chance that they will stay together then.

MS. VANLEEUWEN: That's the way they sent them. They took it out of the boxes when they put it

on the shelf. So if we did send it boxed --

MS. PASTOR: Good suggestion. We have some larger libraries that actually keep them nicely in order and files similar to what you are saying. We'll look into that. We can --

MR. BRADLEY: I want to answer her question about the concrete.

MS. GRIGGS: Thank you.

MR. BRADLEY: The reason -- I think it was the first four alleys where concrete was the original plan. The original Record of Decision assumed the contamination would go fairly deep. That's what some of the borings we took indicated. And our plan was to do the alley until we saw no more battery chips, or until we saw no more battery chips, and then put a barrier over it. And we chose concrete, because it's a more permanent barrier than asphalt. And what we found after doing these first four was that the borings seemed to overstate the depth of the contamination. We were able to clean it up to the 500 parts per million level within 24 inches, in most cases. So we then roped that, SINCE the difference, once we've cleaned it up to 500 parts per million, there is no need for a barrier anymore,

because what we've left in place is less contaminated than the cleanup. So then we'd just be storing. I want to know which alley you're talking about later. We restored it, based on the way it was when we found it. A lot of cases these alleys had different fill, you know, as we go down certainalleys, some of them were blacktop, some concrete to battery chips to only rock to gravel. Just after, you know, we found that to clean these alleys up within 24 inches of the top surface, it would be back, then put rock over, then chips, which is what he was talking about. And then they are restored. You know, it's a continuous layer. It's not all these different types of fill. It is almost impossible to put them back the way we found them, in most cases. That's why we did that, because we could clean them up fully, and then there was no need to put a solid barrier over them, such as concrete, and then go back and continue to patch that up over the years. It's a better plan, because we then can say it's clean for you. Then we don't have to come back and keep repairing it. It's better for everyone.

MS. GRIGGS: Do you think it's safe to put down oil on these little rocks they have been

laying, or whatever type of material that is?

MR. BRADLEY: Yeah, I do. It's kind of interesting you bring that up. Originally, we were going to just put the rocks down, and some of the old men said, 'Why don't you chip seal?' And we did.

MS. GRIGGS: That's not working.

MR. BRADLEY: It's not?

MS. GRIGGS: I'm saying you track it into your home. You can't walk down the alley anymore when you're walking your dog or whatever. And it's a problem, you know, it gets on the tires of your car and --

MR. BRADLEY: I'm glad you brought that up. We will obviously be remediating more of these in the future. If it's not working, we won't do it anymore. If we need to go back and repair some of them, we will do that. It's just unfortunate in that in essence we were asked to do that. Now it's not working. That wasn't recommend as our original plan. We'd did that to respond to some of the aldermen's requests

MR. Paicheff: Brad, have you been evaluating water levels, other than at the site a half a mile away? We had water underneath all of our roads

15 -- our city at 15 foot down, because a lot of people used that to water gardens and that. I don't know if you are aware of that.

MR. BRADLEY: Yeah, I'm aware of that. Only one person that has ever told us that they have done that. That's the guy in Granite, the 1400 block.

MR. PALCHEFF: A guy in Granite has a pump that does that right next door to me. His dried up temporarily. It might be just saturated and so on.

MR. BRADLEY: What?

MR. PALCHEFF: From pumping. What I'm saying, I am saying there is water, I know, in that area, because even part of the land in the area, because of water.

MR. BRADLEY: Well, the water table had not got that far down.

MR. PALCHEFF: That's what I am saying. Are you checking that for lead level, just as well, or at the same time to see how far it has spread?

MR. BRADLEY: We are going to be doing that as part of my thing. We will have to do monitoring to see how far the lead contamination went into the pile. We plan to sample wells -- I'm talking about the 1400 block of Grand -- the next time we're

out. That's the kind of thing we can't track. Did it surface in the area? We're only interested in the downgrading area, because if they're doing that up from the pile where the water is not flowing in that direction, it's not going to have any impact. We did surface, and the Illinois EPA recommended with that. It's the only one we ever found. If there are others, they don't register that with anybody. There is no way to track it. So, it's up to the people to tell us that kind of stuff.

MR. PALCHEFF: One other thing here, I was under the the impression in the meetings, and reading newspapers, and so on, that evaluating what other signs and so forth have been proposed to you of raising this 500 parts per million, 500 parts per million to maybe 1,000 or 1,200 or so. Are you in the process of evaluating and considering changes, possibly changing of that 500?

MR. BRADLEY: That's what we are doing right here.

MS. PASTOR: That's the comment period.

MS. VANLEEUWEN: That's the earlier part.

MR. PALCHEFF: So we would have two months of comments, to get comments in the mail?

MS. PASTOR: You can mail the comments, or tomorrow night people can hand them to us. It's not just three people's comments. There will be many more before it's over.

MS. VANLEEUWEN: Actually, if you look at Dr. Marcus's report on the re-evaluation of the data, depending on what assumptions you make when you run the model, you would look at soil cleanup levels in the range of 300 to 480, which is less than 500. Okay. So the data would suggest that, depending on what the assumptions were that you could have cleanup of less than what we have proposed. However, we feel that the average cleanup we would be able to use an average value for the -- in the computer, into the model, and get cleanup there close to the 500. That's the suggestion that --

MR. PALCHEFF: Did you get above that?

MS. VANLEEUWEN: No. It's slightly below.

MS. PASTOR: Anymore questions? I'm kind of nervous about having someone come over and lock up after us.

MR. PALCHEFF: Stay overnight.

MS. PASTOR: I think they'd prefer not

to.

MS. ANDRIA: It's a tri-part question, I think, it I could get them all three. In the health study, did you get the comments, the public comments on the health study? Is it appropriate to comment on the health study, and is the health study being used in any way in formulating your decision about what cleanup level you're using?

MS. PASTOR: Did you do that?

MR. BRADLEY: As far as, and correct me,, but I think there is only one set of comments that were submitted on health studies. Yes, we have them, because we submitted them.

MS. VANLEEUWEN: We did not.

MS. ANDRIA: At the so-called public hearing, public meeting?

MS. VANLEEUWEN: Yes. But the study was done by the Illinois Department of Public Health, and they solicited comments.

MS. ANDRIA: And you got those comments?

MS. VANLEEUWEN: We sumitted comments. We were the only ones who submitted comments.

MR. BRADLEY: Exactly, just like we're doing. Was there a court reporter there?

MS. ANDRIA: No. No.

MS. VANLEEUWEN: I didn't get anything on that.

MS. ANDRIA: It was purported to be a public meeting.

MR. BRADLEY: Did you make comments?

MS. ANDRIA: Yes, I did.

MR. BRADLEY: I didn't get anything on it.

MS. ANDRIA: I was told that it would be answered, and I never did get anything.

6

MR. BRADLEY: The best thing I got was just a garbled recording of it, which really couldn't pick up what most people were saying on the transcript.

MR. SIEGEL: I have called up the Illinois Department of Public Health and asked if there were any comments submitted in, other than the ones submitted by the U.S. EPA. I was told over the phone that ours was the only one, the only comment submitted.

MS. ANDRIA: That's very interesting. Who did you speak with?

MR. BRADLEY: Dave Webb, was it?

MR. SIEGEL: I don't recall Dave.

MR. BRADLEY: Wasn't it?

MR. PALCHEFF: I thought the Illinois people would be here tonight. Are they going to be here tomorrow?

MR. BRADLEY: I don't know. It is up to them whether they think they want to come.

MS. VANLEEUWEN: She asked if we were considering it. We did look at the study, Kathy.

MR. SIEGEL: There were several calls that weren't returned. Then I called the different agency in the Springfield office. They haven't responded to the request.

MR. BRADLEY: Kathy, we're certainly looking at that. That's one thing that has been produced since the Record of Decision was done in 1990 at that time. We're certainly looking. We're looking at everybody.

MS. VANLEEUWEN: It was a great deal more.

MR. BRADLEY: That was a report that, in essence, we were requested to wait for it's release before we started the public comment period. Yes, of course, we're looking at it.

MS. ANDRIA: Then is it appropriate and legal for us to submit comments on the Public Health report in this comment period?

MS. VANLEEUWEN: It's part of the Administrative Record. Maybe you can submit comments to us. I don't know.

MR. BRADLEY: You can submit whatever comments you want.

MS. ANDRIA: I want it be considered. I don't want it to sit there.

MR. BRADLEY: If you are submitting it on the health study, we're not going to be able to change the health study report.

MS. VANLEEUWEN: We did not do that study.

MS. ANDRIA: If my information has some doubts on the validity of its results, then I think it has to be considered.

MS. PASTOR: That would be legal to make that comment?

MR. SIEGEL: Yes

MS. VANLEEUWEN: You might also want to read our response on our evaluation of the study, and also this report by Allen Marcus. I believe, of these

reports, Dr. Allen Marcus was the doctor on the preliminary assessment of the environmental data of that study.

MS. PASTOR: These would be in the library?

MS. VANLEEUWEN: These are now part of the Administrative Record.

MR. BRADLEY: If you ever have trouble finding anything in the Granite City library, there is a back room; go straight past the circular desk, and then go into the door to the right. They have sort of the archives area. That file has taken up so much stuff to leave it all on the window sill anymore.

MS. ANDRIA: Are the new things on the window sill?

MR. BRADLEY: They kind of move it. We fix it up, and it kind of gets changed again. So I think someone, perhaps library personnel are moving some things in that back room. If you can't find it, try there first, and then call me. I'll hopefully be able to direct you to it.

MS. PASTOR: Can we end this for tonight? I know I'm going to see some of you tomorrow anyway. If you all want some information, if you want to take

a quick look at any maps, or addresses, or streets, or anything, certainly we will stay around for little bit to do that. But otherwise, thank you for coming, and see you tomorrow night, possibly; or give us a call if you have any questions.

* * * * * *